

VERSION WITH MARKINGS TO SHOW CHANGES MADE

in the abstract: An clean version of the abstract follows on a separate page.

In the Specification:(clean version)

PRIOR PROVISIONAL PATENTS

The inventor claims benefit of the provisional co-pending patent application entitled MICRO-RESTRICTION RESTRICTION FRAGMENT LENGTH POLYMORPHISM filed by Mansour Samadpour on March 10,1997 with the U. S. Patent Office, number 60/167734.

in the claims:

Marked up version:

16. (amended) A method for the interstrain differentiation of bacterial isolates comprising the steps of:

- i. isolating genomic DNA from
 - a) a panel of epidemiologically linked bacterial isolates and
 - b) a panel of epidemiologically un-linked bacterial isolates wherein said linked and un-linked isolates are members of the same genus;
- ii. restricting genomic DNA from the linked and un-linked panel of isolates with a panel of restriction enzymes selected from the group consisting of AccI, AluI, AvaI, AvaII, BanII, Bfal, CfoI, DdeI, DpnI, HaeII, HaeIII, HhaI, HincII, HinfI, HpaII, MboI, MnlI, MseI, NciI, NlaIV, RsaI, Sau3AI, ScrFI, TaqI, and ThaI;
- iii. resolving the restricted DNA of step (ii) by gel electrophoresis to generate a banding pattern for each enzyme;
- iv. selecting at least one enzyme from the panel of enzymes of step (ii) that
 - a) restricts all the genomic DNA to fragments of less than 18 kb,

- b) generates a lowest index of diversity from the linked panel of all enzymes selected and
- c) generates a highest index of diversity from the unlinked panel of all enzymes selected;
- v. restricting the isolated DNA from the linked and un-linked panels of bacterial isolates of step (i) with the at least one enzyme of step (iv);
- vi. resolving said restricted DNA of step (v) by gel electrophoretic means capable of separation fragments in the 0.1 to 18 bk range to generate a distinct genetic fingerprint for said linked and unlinked isolates; and
- vii. comparing said distinct genetic fingerprints of step (vi) wherein differences in said genetic fingerprints afford interstrain differentiation of said bacterial isolates.

Abstract

a' The invention provides a method for the identification of genetic subtypes using restriction endonuclease analysis of genomic DNA followed by resolving the DNA fragments by electrophoresis. The method employs frequent cutting restriction enzymes that produce large number of fragments between 0.1 to 18 kb. The resulting restriction fragment polymorphism patterns are highly differentiative and allow for grouping the microbial strains into groups of clonal origin.
